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ABSTRACT

Factors that influence the design of state teacher policies and the impact of these policies on issues of coordination, equity, and teacher supply are examined. The structure and operation of policies in effect in four states--California, Colorado, Georgia, and Oklahoma--are described, and the factors that influence the design of these state policies are analyzed. While all four states each use some type of individual assessment as well as an approved program approach to screen teachers, the state policies showed a wide range of diversity. Various movements, such as the competency education movement, influenced the design of teacher assessment policies, with the major impetus differing for each state. Contextual factors also had a role in policy design, as did availability of funds to develop assessment instruments. One aspect similar to all of the states was that the policies were here to stay, regardless of the potential for low passage rates by minorities or graduates of certain schools of education. The paper concludes with implications of the teacher assessment policies and recommendations for the development of other such policies. (CB)

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The Teacher Supply Pipeline: The View from Four States

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Introduction

Over the last decade, public confidence in the quality of education has steadily declined. In the late 1970s, dissatisfaction with the performance of the public schools, fueled by evidence of declining test scores and functionally illiterate high school graduates, led 40 states to develop accountability measures and to enact laws requiring students to demonstrate proficiency in the basic skills. More recently, public attention has turned to teachers. Information on the background and preparation of new teachers and "horror stories" about bad teachers in the classroom have led the public to question the quality of America's school teachers and policymakers to search for ways to make the teaching force better.

Evidence of a teacher quality problem abounds. Students entering teacher education programs are less able than those entering other fields; many are drawn from the bottom quarter of graduating high school and college students (National Commission on Excellence in Education, 1983). Mean scores on the Scholastic Aptitude Test (SAT) for future education majors dropped from 867 in 1973 to 813 in 1982. In that latter year, the average score for all students entering college was 893. In fact, students intending to major in education had lower SAT scores than any group of students, with the exception of those intending to concentrate in ethnic studies or in trade and vocational education (NCES, 1982).

While some argue that teaching has never attracted "the best and the brightest," others suggest that the decline in the quality of teachers is indicative of a problem in teacher education. Teacher preparation programs are criticized for their lack of rigorous standards and their low status on many college and university campuses. Schools of education lack rigorous admission standards and few students fail once they are admitted into teacher training programs. Stoddart, Losk and Benson (1984) state that schools of education admit about 90 percent of their applicants, while Feistritzer (1984) found that more than half of all teacher education programs do not require their students to pass a test upon completion of their training. In addition, the typical teacher preparation curriculum is criticized for including a large number of education methods courses. A survey of 1350 teacher training institutions cited by the National Commission on Excellence in Education found that 41 percent of an elementary school teacher's coursework is in the field of education, limiting the amount of time available for subject matter courses. The reputation of schools of education has fallen so low, in fact, that some critics are recommending that teacher education be provided through alternative routes (Stoddart, Losk and Benson, 1984).

In response to these teacher quality issues, states have initiated a number of policies affecting entrance into the teaching profession. The most common policies are: (1) those that control access into teacher education by the use of basic skills tests, college entrance tests, high school grade point average, or college lower-division grade point average; (2) those that prescribe the nature of training and instruction for individuals who wish to become teachers by specifying curriculum content, number and type of courses, and practicum experiences; and (3) those that control access into the teaching profession by requiring prospective teachers to pass tests in general knowledge, pedagogy, subject matter specialities, or basic skills, and/or by requiring an evaluation of the beginning teacher's classroom performance. In 1984, 24 states required teacher candidates to pass a test to be certified and similar requirements will become effective in 9 more states by 1988. By 1985, 9 states will require successful performance in internship programs ranging from one to three years. Admission standards for teacher training institutions are being raised and more liberal arts courses and more fieldwork are being required.

At the same time that states are moving to control access into the teaching profession, the nation appears to be facing a teacher shortage. Low salaries, low prestige, and classroom management and discipline problems are discouraging those who might have been inclined to teach in the past. Industry is attracting math and science-oriented college students, and women and minorities have greater access to other employment because of progress toward equal opportunity goals. The size and composition of the teacher shortage is the subject of much debate, however. Some studies project a severe, national shortage by the late 1980s (NCES, 1982; Darling-Hammond, 1984). Critics of these studies note that the projections involve several assumptions about turnover rates that may not be valid and that need more careful analysis (Sweet & Jacobsen, 1983). And, they argue, these projections do not include any assumptions about the size and composition of the teacher reserve pool and its potential for meeting increased demand, the actual need and availability of teachers in different academic areas, and the professional and educational backgrounds of teachers holding "emergency" certificates or teaching "out-of-field" (National Academy of Sciences, 1984). Yet, while the quality of the data varies somewhat depending on the source and on the definition of need (primarily whether or not the teacher is certified to teach in the subject area of specialty), there is considerable evidence that a teacher shortage exists and is severe for special education teachers, and for mathematics and science teachers (NEA, 1981; NCES, 1981).

Taken together, these facts raise a critical question. Can this country maintain an adequate supply of teachers while, at the same time, increasing teacher quality?

Focus of the Paper

While state policymakers have become active in addressing the problem of teacher quality, little is known about the substance or impact of these activities. The authors undertook a study, funded by a grant from the National Institute of Education, to describe policies used by states to regulate entrance into the teaching profession and to collect information on the impact of these policies.[1] The first step involved developing a "pipeline" model that identifies the various points at which state policies can control the entry of individuals into the teaching profession and shows the relationships among these points. Next, information was collected through a 50 state survey to identify the points of policy intervention and the types of policies in effect in each state during 1983-84. Third, in-depth case studies were conducted in California, Colorado, Georgia, and Oklahoma to provide important details about the political environment and rationale behind each policy, about the extent of coordination among the policies in each state, and about the impact of the state initiatives on teacher supply and on equity. The case study state selection criteria included the number and type of policies in effect, the date of policy implementation, region of the country, and availability of data on policy impact. Finally, information from both the survey and the case studies was evaluated to develop recommendations for future state policies.

This paper uses data collected from the four case study states to examine the factors that influenced the design of state teacher policies and the impact of these policies on issues of coordination, equity and teacher supply. Specifically the paper:

(1) describes the structure and operation of policies in effect in the four case study states;

(2) analyzes the factors that influenced the design of these state policies;

(3) evaluates the impact of state policies on teacher supply and equity and reports problems of coordination among policies for teacher education and licensing; and

(4) discusses policy implications of the study's findings and makes recommendations for developing a comprehensive and equitable system of teacher preparation and certification.

[1] The findings of the full study are reported in Goertz, Ekstrom and Coley (1984).

Case Study Methodology

Site Selection

The primary criteria for selecting sites were the point(s) where a state's policies impact on the entry of individuals into the teaching profession; and the number and type(s) of filters in the teacher supply pipeline. These criteria were derived after a classification of the policies in the 50 states showed variation in: (1) the number of filters in the teacher education and teacher certification process, and (2) the extent to which state policies reflect a centralization of authority in the hands of the state or a decentralization of authority to the institutions of higher education (IHE's) and/or to local school districts.

Figure 1 shows five models of state policies. The letters indicate whether the responsibility for setting policies and/or establishing standards at each point in the pipeline rests with the state(S) or with institutions of higher education (I).

Figure 1

Classification of State Policies

State Control	Model	Entrance into Teacher Ed	Teacher Ed Curriculum	Completion of Teacher Ed	Entry-level Certification	Advanced Certification
Low	1	I	S/I	I	S/I	S
↓	2	I	S/I	I	S	S
	3	I	S/I	S	S	S
	4	S/I	S/I	S	S	S
High	5	S	S/I	S	S	S

S = State policy/state standard applied
S/I = State policy/IHE discretion applied
I = IHE sets policy and standard

Model 5 (High State Control) exemplifies a situation where the state sets criteria and specifies minimum proficiency levels for students admitted into teacher education programs, for students completing these programs and for individuals obtaining both levels of certification. At the other end of the continuum, Model 1 (Low State Control), the state sets minimum policies (e.g., parameters for an approved program of teacher education) and gives IHEs control over the selection and preparation of teaching candidates. Models 2, 3 and 4 present situations where the state intervenes in more points along the pipeline and give IHEs increasingly less discretion in the setting of standards.

A secondary consideration in selecting case study sites was date(s) of policy implementation since we wanted to be able to study the effects of each type of filter. This criterion greatly limited the number of states available for study. Several states had recently legislated changes in teacher education and certification policies but would not begin to implement them until 1984 or 1985. In addition, we hoped to include states from different regions of the country. This also proved difficult since southern states seem to be taking the lead in strengthening state control over teacher education. Finally, we wanted to avoid focusing exclusively on testing as a filtering mechanism.

Within these constraints, we identified twelve states to be considered as case study sites. These were entered into a site selection matrix (See Figure 2). The four states finally chosen for case studies were California, Colorado, Georgia, and Oklahoma.

Figure 2

Site Selection Matrix Showing Characteristics of Case Study States

Number and Type(s) of Filters	Point(s) of Intervention: Teacher Education		Teacher Certification	
	Entrance	Completion	Initial	Advanced
One — Test	CO		CA	
One — Other				
Two or More — Tests				
Two or More — Test plus other		GA	GA,OK	GA,OK

The Case Study Process

After the states were selected, letters were sent to the chief state school officers describing the project and asking permission to interview state education department personnel. All four states contacted agreed

to participate. One hour interviews were conducted with 15 to 20 respondents in each state. Respondents included staff of state agencies responsible for setting and administering state policies on teacher education and certification, representatives of teachers organizations and other statewide education interest groups, key legislative leaders, members of state boards of education, and representatives of institutions of higher education with teacher preparation programs. In addition, project staff collected documents describing the operation of state programs and, where available, data on the impact of testing and other policies.

In order to ensure comparability across the four states, interview questions were developed around four topics: (1) the structure and operation of state policies, (2) the history of state policies and current political environment, (3) the rationale and impact of state policies, and (4) education issues facing teachers in each state. More specifically, respondents were asked:

- What are the state policies that regulate teacher preparation, certification and licensing in your state?
- Who is responsible for developing and implementing these policies?
- What relationship, if any, exists among these policies?
- What were the origins of the state policies on teacher education and certification and who was involved in designing them?
- What was the expected impact of these state policies and what have been the consequences of these policies on the flow of individuals into the teaching profession?
- What kinds of new and/or revised state policies are currently being considered in your state?

These topics were then used to frame the writing of the four case studies and to structure the cross-state analysis. (The individual case studies are included in Goertz, Ekstrom and Coley, 1984.)

Policies in the Four States

The four states selected for case study each use some type of individual assessment as well as an approved program approach to screen teachers. The policies they enacted, however, illustrate the wide range of policies used by states across the country.

Colorado requires that students pass basic skills tests in oral and written English communication skills and in mathematics before formal admission into an approved teacher education program or assignment to student teaching. A norm-referenced test, the California Achievement

Test (CAT), is used to assess written English and mathematics skills. The passing score is the 75th percentile score for high school seniors nationally. Students who fail any section of the test may be retested three additional times.

California also uses a single assessment with a basic skills test. The California Basic Educational Skills Test (CBEST) is designed to measure college-level skills in reading comprehension, English composition and mathematics. The original legislation required all applicants for teaching credentials (except those in adult education or in a children's center) to pass this test. A 1983 amendment requires that the test be taken, but not passed, before admission to teacher education. To pass, an examinee must have a total score of 123, with a minimum score of 37 on each of the three test sections. The cutoff scores set by the Superintendent of Public Instruction, at a level slightly higher than those recommended by an advisory board, were based on a predetermined proportion of items to be passed in each test section, ranging from 65 percent to 70 percent. Individuals may repeat any sections of the test they fail with no limit on the number of retestings.

Georgia conducts two assessments of individuals entering the teaching profession. All applicants for initial certification must pass the Georgia Teacher Certification Test (TCT) in the area of their teaching specialty. The TCT is composed of 23 criterion-referenced area tests. Individuals who fail this test may teach for one year on a probationary license. The test may be retaken any number of times. During the initial three years of teaching, candidates for renewable certification must demonstrate acceptable teaching performance as measured by the Teaching Performance Assessment Instruments (TPAI). This instrument, which assesses 14 generic competencies evaluated by 45 indicators, is composed of five sections: (1) teaching plans and materials, (2) classroom procedures, (3) interpersonal skills, (4) professional standards, and (5) student perceptions. Candidates are assessed up to six times over a three year period. The assessors are a supervisor, a peer teacher, and an external data collector. Candidates must attain 85 percent of the competencies on the first assessment or 75 percent on two or more assessments to pass.

Oklahoma also conducts two assessments. Individuals applying for an entry-year license take a criterion-referenced test of knowledge in the teaching specialty area, called the Oklahoma Teacher Certification Testing Program (TCT). This consists of 76 tests covering 34 content areas. Cutoff scores were set as part of the test development process, based on estimates by current teachers and teacher educators of the proportion of successful beginning teachers who could pass each item. Individuals who fail the test may retake it as often as they wish. Individuals with an entry-year license must take part in the Entry-Year Assistance (EYA) program. The beginning teacher is observed and evaluated at three times during the first year of teaching using an instrument that covers human relations, teaching and assessment, classroom management and

professionalism. The evaluators are a teacher consultant, an administrator, and a teacher educator. At the end of the first year the evaluators may recommend certification or may recommend that the teacher take part in the EYA program for a second year. If teachers are not recommended for certification after the second year, they cannot continue teaching.

Factors Influencing Policy Design

A number of factors influenced the design of assessment policies in these four states. One can look first at the impetus behind the policy. Georgia policymakers were swept up in the competency education movement of the early 1970s. In response to legislative interest in competency-based certification, a statewide task force produced a plan to implement competency-based preparation and certification in Georgia by 1978. Oklahoma policymakers apparently looked to Georgia for a model program. Basic skills testing was enacted in Colorado and California because, in each state, a determined legislator responded to anecdotal evidence of a crisis in teaching.

A second factor is contextual. In 1977, the Colorado State Board of education required IHEs to screen prospective teacher education candidates for basic skills competencies, but left the choice of an assessment instrument to the IHEs. The legislation requiring use of the CAT went one step further by imposing a uniform measure across all institutions. The sponsor of the CBEST legislation in California had authored legislation in 1977 that mandated statewide pupil proficiency testing. Basic skills testing of teachers seemed to him to be a logical extension of this earlier legislation.

A third factor is the availability of funds to develop and implement assessment instruments. For example, both Colorado and California legislated the use of basic skills tests as screens. When the Colorado legislature did not appropriate money for test development, policymakers were limited to existing instruments and looked primarily at those already used by IHEs to screen applicants. In California, funds were available to support the development of a new test when it was determined that commercial tests did not satisfy the objectives set by the advisory committee. Georgia and Oklahoma also had sufficient resources to undertake a lengthy test development process.

A final factor is politics. Responsibility for formulating and administering teacher education and certification policies is shared by state legislatures, state boards of education, state departments of education and other state agencies, and institutions of higher education. In most cases, the legislatures specify the area(s) to be assessed (e.g., basic skills competencies in mathematics, communications, etc.; teaching specialty; and/or teaching performance) and the point(s) in the pipeline where the assessments will be made (e.g., admission into teacher education, admission into student teaching, completion of the program, etc.). The State Board of Education is then given the authority

to select an assessment instrument, set minimum standards (such as test cut-off scores) and develop assessment procedures.

The Georgia legislature gave the State Board of Education total responsibility for designing a competency-based teacher assessment program. All negotiations and compromises were made outside the legislative chambers. Oklahoma's legislation, which is somewhat prescriptive, was subject to 100 amendments; 35 were accepted. California's Senator Hart first proposed that CBEST be used to screen applicants to teacher education programs. This proposal was opposed successfully by IHEs that felt such a policy would encroach on their right to set admissions policies. As a result, the test became a requirement for certification. Politics also affected standard-setting. Although, California used sophisticated methods to establish cutoff scores, the Superintendent of Public Instruction raised the cutoff score a few points above that recommended by the advisory committee because he was personally committed to raising educational standards.

One generalization can be made across the four states. Although they differ in approach, the new state policies are here to stay. Regardless of low passage rates by minorities or by graduates of some IHEs, legislators are in no mood to lower standards. They feel that public response has been favorable and that there is more support for raising standards at other points in the pipeline than for modifying existing policies.

Coordination Among State Policies

There are a number of junctures in the teacher preparation and licensing process at which states currently impose requirements. There is little evidence, however, that in most states these requirements are developed as a part of a comprehensive set of state policies affecting entrance into teaching (Peterson, 1984). Legislators often enact policies in a piecemeal fashion, making isolated responses to isolated problems rather than taking a broader view and providing a set of coordinated procedures. Georgia and Oklahoma provide examples of states which have tried to produce a coordinated set of processes which link teacher performance to teacher education. Yet, they share two types of coordination problems with the other case study states.

First, accountability for student failure is often misplaced. Although instruction in basic skills and subject matter areas is usually not provided in the schools of education, basic skills and subject matter specialty tests are used to evaluate the teacher education programs. Teacher education departments are held responsible for education students' knowledge of these areas while non-education departments actually providing the instruction have little or no incentive to improve their teaching in ways that will improve teacher quality. This problem is aggravated in states like Georgia where schools of education may be placed on probation,

and ultimately closed, if their graduates perform poorly on subject matter tests.

The second coordination problem centers on the provision of remediation to individuals who do not initially pass the tests. Although most of the case study states recommended such remediation, it is required only in Colorado. None of the four states provide funds for remediation. In addition, the nature of tests used often makes remediation difficult. CBEST and CAT are norm-referenced tests. Thus, institutions cannot identify specific deficiencies within each basic skill subtest area. Moreover, in California, students can decide whether or not to have the CBEST score reported to their institutions. Without this information, institutions may have no indication that individuals need remedial assistance. In both Georgia and Oklahoma, although the subject matter tests are criterion-referenced, limited individual information is available to IHEs. The primary data provided to IHEs to assist in remediation are objective mastery reports which provide a list of objectives with low pass rates across the state.

There also appears to be no coordination between the tests used by the states in other parts of higher education (e.g., for admission, or for promotion to junior standing) and those used in teacher education. For example, the California State University system cannot compare the performance of entering freshmen on its communications skills and mathematics entrance tests and their performance on CBEST one to two years later. Also there is considerable institutional variation in the extent to which teacher education programs can and do make use of the remedial services available on their campuses for students who fail these other tests.

Impact of State Policies on Teacher Supply and Equity

The states which have introduced new policies in the last five years perceive them as strengthening teacher education programs, making students more serious about teacher education, focusing attention on weaknesses in the teacher education curriculum, and screening out students who lack sufficient knowledge of basic skills, subject matter and/or pedagogy. A major focus of the case studies was to identify, collect and analyze data on the characteristics of individuals screened out of the teaching profession and on the impact of state policies on teacher supply.

Who Is Screened Out Of Teaching?

Although the impact of individual assessment policies differed somewhat across the four case study states, several patterns were evident.

First, it appears that more people are screened out by basic skill testing and by testing early in the teacher preparation process than by

later subject matter testing or evaluation of beginning teachers. In Colorado, the pass rate for the CAT, which is required for entrance into teacher education, hovers around 65 percent. The initial pass rate on CBEST, which is required for certification in California, is 68 percent. In Georgia, 78 percent of first time test-takers pass the TCT, which is required for initial certification, while fewer than one percent of beginning teachers who complete three years of teaching are screened out by the TPAI. However, about 25 percent of beginning teachers leave the classroom before the end of three years either because of sub-standard performance on the TPAI or because they decide they do not wish to pursue a career in teaching. In Oklahoma, about 80 percent of first time examinees pass the TCT, and 98 percent of beginning teachers are recommended for certification after first year evaluation in the EYA program.

Second, the passage rates differ considerably by racial/ethnic group. In California, 76 percent of white test-takers, 39 percent of Hispanic test-takers, and 26 percent of Black test-takers pass CBEST. In Georgia, 87 percent of White students pass TCT on the first attempt but only 34 percent of Black students do so. In Oklahoma, the TCT pass rate for Whites is 79 percent, for Hispanics 58 percent, and 48 percent for Blacks. Colorado does not collect data by race/ethnicity.

Finally, the individual assessments have a differential impact on students from different types of IHEs. The CBEST pass rates at California IHEs ranged from a low of 33 percent to a high of 90 percent. Up to 85 percent of the students at more selective institutions but only 30 to 40 percent of students at open admissions institutions in Colorado pass the CAT. Similar institutional differences exist in Georgia and in Oklahoma. It seems clear that the more selective the general admission policies of the IHEs are, the higher the pass rates will be on later assessments.

Many institutions with high failure rates have responded by raising the admission standards for their teacher education programs. Several California State University campuses now require students to pass CBEST before admission to teacher education, while other campuses have also raised the minimum GPA requirements. In Colorado, students at some open admissions institutions must now pass the CAT before acceptance into a teacher education program. These types of action, of course, reduce the amount of time which inadequately prepared students have to overcome their deficiencies. The case study data suggest that this group includes older students returning to education with "rusty" skills, especially in mathematics, and students from disadvantaged backgrounds and/or with inadequate secondary school education.

Teacher Shortages

There is a general perception among the respondents in our case study states that the use of individual assessment will aggravate teacher shortages. However, it is difficult to isolate the impact of state policies from other factors which have also affected the supply of

beginning teachers: changing demographics, low salaries and expanding employment opportunities for women and minorities. We found that few states or IHEs collect the type of data needed to assess accurately the impact of changing state policies on teacher supply and demand. None of the states we visited had information on the number of unfilled teaching positions by program areas or by type of community. This situation is not uncommon; in 1982, only 11 states had automated teacher supply/demand models (National Academy of Sciences, 1984).

Available data on individuals screened out of the teaching profession suggest, however, that state policies will aggravate shortages of certain types of teachers. A shortage of minority teachers is evident from the data cited above. Statistics collected by other states using teacher testing programs show that their tests have also had a differential impact on majority and minority populations. In Florida, 83 percent of those who took the state's teacher certification examination in 1982 passed each of its four parts. Among Blacks the figure was 35 percent. When prospective teachers took a competency test required for admission to colleges of education in Texas, 62 percent of the Whites passed all three sections of the test compared to 10 percent of the Black and 19 percent of the Hispanic test-takers. These figures have led one educator to predict that "within the decade, the minority teaching forces will be less than 5 percent, compared to 12 percent in 1980." (Education USA, July 30, 1984.) A related consequence will be a growing shortage of teachers for bilingual education programs.

Teacher shortages in certain types of school districts may also be increased by some of these assessment policies. In California, severe teacher shortages in inner city schools were reported and cited as one reason for the introduction of a program to provide alternative routes for entering the teaching profession. In all four case study states, increasing certification requirements were viewed as creating teacher supply problems in rural school districts, where the pool of available individuals is small. In Oklahoma, especially, where there are pressures to certify individuals in their major subject area only, considerable opposition has been expressed by rural superintendents who often need individuals who are certified to teach a variety of subjects.

Finally, policymakers in Georgia and Oklahoma, which use teaching specialty knowledge tests, expressed concern about the different pass rates in various subject matter areas. In Oklahoma, for example, pass rates have been somewhat lower in teacher shortages areas, such as science (earth sciences, 22 percent; physics, 44 percent) and foreign languages (French, 21 percent; German, 57 percent), than in areas where the teacher supply is greater.

Policy Implications

It is necessary to have screens in the teacher supply pipeline to ensure the quality of individuals entering the teaching profession.

It appears that, as a method, assessment of individual teachers provides a better way of evaluating the capabilities of potential teachers than does program approval. However, the findings from this study lead us to conclude that the approaches used by most states today are inadequate to address the problems of equity, coordination and accountability.

Equity

Current state policies focus on screening out people, rather than on developing the talents of individuals who wish to become teachers. This emphasis impacts adversely on: (1) students entering college with weak secondary school preparation, (2) adults returning to college or making a career change, and (3) open-admissions institutions and their students. Current policies which restrict access into the teaching profession will reduce the socio-economic and racial/ethnic diversity of the nation's teaching force at a time when the schools are educating larger numbers of minority students.

When students are screened prior to entrance into teacher education, IHEs have little opportunity to provide instruction to compensate for students' past educational inadequacies. With the help of a well-designed remediation program, many of the students now excluded could become satisfactory teachers, in terms of both subject matter knowledge and teaching performance.

There is also a conflict between states' policies for open admission to higher education and policies restricting admission to teacher education. Open-admissions colleges tend to attract more students from disadvantaged backgrounds or with inadequate high school preparation. High failure rates on certification tests, however, have led several states to consider closing or placing on probation, teacher education programs at these types of institutions. This can result in teacher education programs being available only in institutions which have selective admissions policies and in the abolishment of teacher education in institutions with open admissions policies.

In addition, state policies are acting as a damper on students' interest in a teaching career. The testing requirements are often seen as a hurdle and one that is not required for entrance into other occupations. The mandated publication of test results and the extensive publicity about racial/ethnic differences in the pass rates on tests for prospective teachers appears to have led many minority students to assume, whether correctly or not, that they too will be unable to pass these tests. This has, consequently, led these students to choose other careers.

The end result of current state policies will be to reduce the social and economic heterogeneity of the nation's teaching force. In 1980, 87 percent of public elementary and secondary school teachers were

White, 10 percent were Black and 2 percent were Hispanic. At the same time, 16 percent of the school children were Black, 8 percent were Hispanic and 3 percent were from other minority groups. The racial/ethnic mismatch of teachers and children varies across the states. Student bodies in the southern states are 30 to 50 percent minority; the teaching force is 20 to 40 percent minority. Forty-three percent of California students are non-White, while only 16 percent of their teachers are non-White. In New York and Arizona, the percentage of minority students is 3 to 4 times greater than the percentage of minority staff (Dilworth, 1984). Yet, it is those states with large minority student enrollments--in the South, California, New York, New Mexico, Texas and Arizona--that have implemented programs to screen teachers. The poor performance of minorities on these tests, the closing of teacher education programs in open-admissions and predominantely minority institutions, and the declining number of minorities entering college and aspiring to be teachers will worsen the socio-economic and racial/ethnic mismatch between student and teacher in the next twenty years.

Coordination

Many states focus on assessing a limited number of skills which have varying degrees of relevance to the teacher education curriculum and, ultimately, to classroom performance. For example, 14 states require basic skills tests for certification and nine require tests of general knowledge but only nine evaluate a beginning teacher's classroom performance before certification is granted.

State policies also result in misplaced accountability with teacher education departments held responsible for students' knowledge of the basic skills and of subject matter area. Consequently, non-education departments have little or no incentive to improve their teaching in ways that will improve teacher quality. This situation is aggravated by state policies that use test score results in basic skills and subject matter areas to place teacher education programs on probation.

Accountability

State policies are short-sighted because no attention is given to the impact of policies on teacher supply at a time when growing teacher shortages are projected. Few states collect data on either the impact of their teacher screens or the supply and demand for teachers by teaching specialty and geographic region. This means that policymakers cannot determine who is being closed out of the teaching profession by state policies, at what point in their education students are being screened out, and what kind of alternative programs should be developed when the impact of policies is undesirable.

Recommendations

State policies should address the multiple points in the teacher supply pipeline in a coordinated and equitable manner. A comprehensive and equitable system of teacher preparation and certification should include the following elements:

- All students entering college should be assessed to identify basic skill deficiencies and, if necessary, opportunities for remediation should be provided.
- A student should show proficiency in basic skills before admission to a teacher education program. This policy should apply to all college majors, not just teacher education. The mechanism used to screen teacher candidates for basic skills proficiency should be the same as that used to assess entering freshmen.
- Students' knowledge of subject matter specialty and pedagogy should be evaluated before a teacher education degree is awarded, using a common metric across IHEs within a state.
- Candidates for certification should show evidence of proficiency in basic skills, subject matter area and professional knowledge and complete a successful entry-year teaching assignment.
- Screening devices should be designed to provide diagnostic information for student remediation and for program improvement.
- Adequate resources should be made available for remediation and program improvement.

Coordination and accountability can be achieved by:

- Informing non-education departments of deficiencies in student performance on subject matter examinations and teacher education departments of deficiencies in professional knowledge and first year teaching performance.
- Applying probationary policies specifically to those departments that provide the relevant subject matter and teacher education courses.
- Having state agencies collect data necessary to determine the impact of state policies on teacher supply, paying particular attention to shortages of minority teachers, and teachers in specific subject matter areas and geographic regions.

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